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Instructions :	<ol> <li>(1) All questions are compulsory.</li> <li>(2) Illustrate your answers with neat sketches wherever necessary.</li> </ol>									v.
	(3) Figur	res to the <b>righ</b> me suitable do	<b>it</b> indicat	e <b>full</b>	mark					
									I	Marks
1. Attempt any six :										12
A) i) Define the term	n baud rate.									
ii) State the advar	tages of fib	er optic cable.								
iii) State the name	of following	g IEEE standar	rds :							
a) 802.3		b)	802.4							
c) 802.5		d)	802.11							
iv) What is encaps	ulation ?									
v) Explain the adv	-	-								
vi) Draw layered a										
vii) List any four w	•	•								
viii) List any four la	iyers of OSI	Model.								
B) Attempt <b>any two</b> :										8
i) Describe the ch		s of Data Com	municatio	n.						
ii) Define the term a) Wi Fi	1:	b)	WEMON							
a) Wi Fi b) Wi Max. iii) Explain the concept of DNS with suitable example.										
_		S will suitable	e example							
2. Attempt any four :										16
i) State the following	terms :									
a) Amplitude			Frequenc	y						
c) Time Period		,	Phase.							
ii) What is multiplexin	•	ypes.								
iii) Explain IEEE 802.	5 standard.									
iv) Differentiate betwe	en serial and	l parallel comn	nunicatior	1.						
v) Explain the function	ns of followi	ng layers :								
a) Physical		b)	DLL							
c) Network		d)	Transpor	t.						

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## Marks vi) List in which layer following device works : b) Repeater d) Gateway. 3. Attempt any four : i) Explain the concept of Hand off operation in mobile phones. ii) Explain the concept gateway along with its working. iii) What is topology? List its types. iv) Explain the concept of FTP with neat diagram. v) Explain working of packet switching. vi) Explain the term leased line.

- 4. Attempt any four :
  - i) Differentiate between LAN and WAN on following points :
    - a) Speed b) Area
    - d) Communication media. c) Installation Cost
  - ii) Differentiate between analog and digital signal.
  - iii) Explain the term DQDB.
  - iv) Explain the concept of virtual LAN.
  - v) Differentiate between TCP and UDP.
  - vi) Define standards and list standard creation committees.

### 5. Attempt any four :

- i) Define IP. State its types along with range and subnet masks.
- ii) What are the problems in the Internet working?
- iii) Explain the protocol ARP.
- iv) State advantages and disadvantages of Bus topology.
- v) Differentiate between Fast and Gigabit Ethernet.
- vi) Explain the concept of Data Fragmentation and reassembly.

### 6. Attempt any four :

- i) Explain the internal architecture of ISP.
- ii) Explain the types of Routers.
- iii) Explain the term CRC along with suitable example.
- iv) Differentiate between synchronous and asynchronous communication.
- v) State the functions of bridge.
- vi) Explain the concept of WAN addressing.

#### 17430

a) Router

c) Bridge